

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended): A mobile station comprising:

a transmit buffer for storing data about a plurality of communication services on a communication-service-by-communication-service basis or on a transmit-channel-by-transmit-channel basis;

an amount-of-data information determining means for monitoring the data which are stored in said transmit buffer on a communication-service-by-communication-service basis or on a transmit-channel-by-transmit-channel basis so as to determine communication-service-by-communication-service or transmit-channel-by-transmit-channel amount-of-data information; and

a transmitting means for transmitting the communication-service-by-communication-service or transmit-channel-by-transmit-channel amount-of-data information determined by said amount-of-data information determining means to a base station.

2. (Previously Presented): The mobile station according to Claim 1, wherein said amount-of-data information determining means converts the communication-service-by-communication-service or transmit-channel-by-transmit-channel amount-of-data information into a binary digit number, and outputs the amount-of-data information indicating the binary digit number to the transmitting means.

3. (Previously Presented): The mobile station according to Claim 1, wherein said amount-of-data information determining means converts the communication-service-by-communication-service or transmit-channel-by-transmit-channel amount-of-data information

into a data occupation ratio of the transmit buffer, and outputs the amount-of-data information indicating the data occupation ratio to the transmitting means.

4. (Previously Presented): The mobile station according to Claim 1, wherein said amount-of-data information determining means converts the communication-service-by-communication-service or transmit-channel-by-transmit-channel amount-of-data information into a time, and outputs the amount-of-data information indicating the time to the transmitting means.

5. (Previously Presented): The mobile station according to Claim 1, wherein said amount-of-data information determining means converts the communication-service-by-communication-service or transmit-channel-by-transmit-channel amount-of-data information into a transmission rate, and outputs the amount-of-data information indicating the transmission rate to the transmitting means.

6. (Previously Presented): The mobile station according to Claim 5, wherein said amount-of-data information determining means converts the communication-service-by-communication-service or transmit-channel-by-transmit-channel amount-of-data information into a number of bits per second or a number of bits per unit time.

7. (Previously Presented): The mobile station according to Claim 1, wherein said amount-of-data information determining means converts the communication-service-by-communication-service or transmit-channel-by-transmit-channel amount-of-data information into a channel amplitude coefficient or a channel amplitude coefficient ratio, and outputs the

amount-of-data information indicating the channel amplitude coefficient or the channel amplitude coefficient ratio to the transmitting means.

8. (Previously Presented): The mobile station according to Claim 1, wherein said amount-of-data information determining means converts the communication-service-by-communication-service or transmit-channel-by-transmit-channel amount-of-data information into a power dimension or a power dimension ratio, and outputs the amount-of-data information indicating the power dimension or the power dimension ratio to the transmitting means.

9. (Previously Presented): The mobile station according to Claim 1, wherein said amount-of-data information determining means outputs an index indicating a combination of pieces of communication-service-by-communication-service or transmit-channel-by-transmit-channel amount-of-data information to the transmitting means, instead of the communication-service-by-communication-service or transmit-channel-by-transmit-channel amount-of-data information.

10. (Currently Amended): A base station comprising:  
a receiving means for receiving communication-service-by-communication-service or transmit-channel-by-transmit-channel amount-of-data information from a mobile station;  
an assignment determining means for determining assignment of radio resources for data to be transmitted from said mobile station ~~on a communication-service-by-communication-service or transmit-channel-by-transmit-channel basis~~ according to the communication-service-by-communication-service or transmit-channel-by-transmit-channel amount-of-data information received by said receiving means; and

a notifying means for notifying transmission control information indicating the assignment of radio resources determined by said assignment determining means to said mobile station.

11. (Currently Amended): A communication system provided with a base station which notifies transmission control information indicating radio resources ~~a data transmission timing~~, and a mobile station which transmits data to said base station according to the transmission control information notified from said base station,

said mobile station comprising:

a transmit buffer for storing data about a plurality of communication services on a communication-service-by-communication-service basis or on a transmit-channel-by-transmit-channel basis;

an amount-of-data information determining means for monitoring the data which are stored in said transmit buffer on a communication-service-by-communication-service basis or on a transmit-channel-by-transmit-channel basis so as to determine communication-service-by-communication-service or transmit-channel-by-transmit-channel amount-of-data information; and

a transmitting means for transmitting the communication-service-by-communication-service or transmit-channel-by-transmit-channel amount-of-data information determined by said amount-of-data information determining means to said base station,

and said base station comprising:

a scheduler for assigning radio resources used for carrying out data transmission to said mobile station ~~on a communication-service-by-communication-service basis or on a transmit-channel-by-transmit-channel basis~~ according to the amount-of-data information received from said mobile station.

12. (Original): An amount-of-data information transmission method comprising the steps of:

monitoring data which are transmitted from a terminal on a communication-service-by-communication-service basis or on a transmit-channel-by-transmit-channel basis;

determining amount-of-data information indicating an amount of data on a communication-service-by-communication-service basis or on a transmit-channel-by-transmit-channel basis; and

transmitting the amount-of-data information which is determined on a communication-service-by-communication-service basis or on a transmit-channel-by-transmit-channel basis to a base station.

13. (Currently Amended): A transmission-control-information notification method comprising the steps of:

when a base station receives amount-of-data information which is determined on a communication-service-by-communication-service basis or on a transmit-channel-by-transmit-channel basis from a mobile station, determining radio resources for data to be transmitted from said mobile station ~~a data transmission timing on a communication-service-by-communication-service basis or on a transmit-channel-by-transmit-channel basis~~ according to the amount-of-data information; and

notifying transmission control information indicating the radio resources ~~data transmission timing~~ to said mobile station.

14. (Currently Amended): A wireless communication method comprising the steps of:

when data about a plurality of communication services are stored in transmit buffers on a communication-service-by-communication-service basis or on a transmit-channel-by-transmit-channel basis, monitoring the data which are stored in the transmit buffers on a communication-service-by-communication-service basis or on a transmit-channel-by-transmit-channel basis;

determining amount-of-data information indicating an amount of data on a communication-service-by-communication-service basis or on a transmit-channel-by-transmit-channel basis;

transmitting the amount-of-data information which is determined on a communication-service-by-communication-service basis or on a transmit-channel-by-transmit-channel basis to a base station;

when the base station receives the amount-of-data information which is determined on a communication-service-by-communication-service basis or on a transmit-channel-by-transmit-channel basis from a mobile station, determining radio resources for data to be transmitted from said mobile station ~~a data transmission timing on a communication-service-by-communication-service basis or on a transmit-channel-by-transmit-channel basis~~ according to the amount-of-data information;

notifying transmission control information indicating the radio resources ~~data transmission timing~~ to said mobile station; and

said mobile station transmitting the data to said base station ~~on a communication-service-by-communication-service basis or on a transmit-channel-by-transmit-channel basis~~ according to the transmission control information notified from said base station.